

**Early Seral Module  
for the  
Timberland Planning Component**

**California Department of Fish and Game  
Northern California - North Coast Region  
Interior Timberland Planning Team**

**Leadperson**

Steve Burton

**Resource Issue**

Historically, light intensity fires burned throughout the forested regions of California on a greater frequency than today. Fires resulted in tree mortality, thereby reducing the canopy cover and promoting growth of early seral vegetation (i.e. grasses, forbs and shrubs). Several early seral species (e.g. *Ceanothus cuneatus*) have evolved so that fire and/or mechanical disturbance are necessary for propagation. Initiation of fire exclusion policies in the late nineteenth and early twentieth centuries has resulted in reduced quality and abundance of this habitat type. The exclusion of fire has resulted in many forest stands reaching a stage where they are heavily stocked with a dense canopy. Consequently, little moisture or sunlight (elements necessary for the plant propagation) reach the forest floor. Fires also keep montane meadow areas free of coniferous tree species. Currently, conifers are encroaching on many meadow areas and not only shade out the grasses, forbs and shrubs, but utilize the water and nutrients and alter the hydrodynamics of the meadow systems.

Areas where aspect and moisture levels preclude tree growth also suffer from fire suppression. In the absence of fire, shrub species found on these sites will grow dense and decadent and reduce moisture and sunlight at the ground. Once they reach this stage, these shrub species provide little value to wildlife (i.e. palatable portions of the plant are out of reach of most wildlife species).

Drought conditions, increased fuel loads and public concern have greatly impacted the ability of agencies and timber companies to use prescribed burning as a management tool. Historically, the majority of California's wild fires would burn in the fall. Those species that require fire as a necessary component of their propagation have evolved with these fall burns. However, because the moisture levels are higher and the threat of losing control of a prescribed burn is less, many intentional burns are conducted in the spring. Many times these fires do not burn hot enough to trigger the reproductive cycle of these fire dependent species. Additionally, spring burns can be quite detrimental to several wildlife species (i.e. ground nesting birds and amphibians).

It is well known that early seral vegetation is extremely important to a myriad of wildlife species. Early seral vegetation communities support the greatest species diversity in northern California's forested regions. There are also many species that are indirectly dependent on early seral vegetation (i.e. predators whose prey items are dependent on early seral vegetation).

Absence of fire is not the only threat to early seral vegetation. Grazing and climate have been shown to affect the growth patterns of this habitat type. Intensive livestock grazing for extended periods or during critical times of the year can change vegetative communities and sometimes favor the spread of non-native, noxious species. Not much can be done regarding management for changes in climate conditions. However, timing and intensity of grazing can be managed by landowners so that it can actually be used as a management tool to benefit the resource.

Finally timberland management practices can impact early seral vegetation. Application of herbicides in clearcut units and seral stage compression can result in a reduction of early seral vegetation on the landscape.

## **Goal**

- Collaborate with timber companies to increase the quantity and quality of early seral vegetation

## **Objectives**

- Review existing information on early seral vegetation and wildlife use
- Work with companies and other DFG functions Work with timber companies and other DFG functions to develop programmatic approaches to manage early seral vegetation
- Develop partnerships and/or collaborate with timber companies to identify and develop projects that benefit early seral vegetation
- Implement an adaptive management system based on a monitoring program that will verify implementation and provide information on the effectiveness of programmatic approaches

## **Strategic Plan**

Only through collaboration will the appropriate information be collected so that both the timber companies and the Interior Timberland Planning Team (Team) can make informed decisions on the management of this resource. The partnership and/or collaboration between the Team and the timber companies must be built on trust. That trust will require an understanding between the Team and timber companies that any information collected in this process will be used for the benefit of the resource. This understanding may not result in the development of early seral management plans, or a change in the way timber companies manage their lands for this resource. However,

this process will provide information that will allow the Team and timber companies to understand how various activities positively or negatively effect early seral vegetation.

Additionally, there will be an inherent benefit of the collaborative process. Working together to develop study or project designs, monitoring and reporting programs will eliminate many of the commonly asked questions (e.g. the goal of the study, the manner in which the data were collected, the manner in which the data were analyzed, etc.) about projects designed by only one party.

Simply put, the strategic plan for the Team's early seral planning is to collaborate with the timber companies. The Team and the timber companies will gather and review existing information, identify areas in which information is insufficient, develop projects to gather necessary information and that potentially improve early seral habitat types, monitor and report the results, and potentially use those results to develop and implement early seral management plans.

## **Monitoring**

Monitoring of the projects described above will take place in three phases. Once the projects are identified and a study design is complete, pre-project data collection will provide an information baseline. This baseline can then be compared to information collected after project implementation.

Implementation monitoring will take place once the project is initiated and will insure the project is completed as designed.

Finally, post-project monitoring will provide information that can be compared to the baseline described above. Pre and post-project data collection will be conducted according to an agreed upon study design. Monitoring for several years after the project is completed will allow the Team and the timber companies to identify trends and determine the effectiveness of the conservation strategies. Annual reports including digital photographs will be necessary along with a final report analyzing the results of the project.

## **Adaptive Management**

Finally, there must be feedback between the Team and the timber companies. This feedback will be part of an adaptive management process. This process will help to identify and avoid problems in future projects. More importantly, however, adaptive management will allow both the Team and the timber companies to make informed decisions while trying to achieve the goal of increasing the quantity and quality of early seral vegetation.

## **Measures of Success**

Success will be measured by the extent to which the following are met:

- Cooperation/Collaboration between the Team and timber companies
- Review of existing literature on early seral habitat types
- Identification of information needs
- Cooperative development of projects aimed at gathering needed information
- Implementation of projects
- Completion of monitoring and reporting